Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended). A method for the treatment of accelerated bone resorption that is not induced by inflammation, in a mammal subject, the method ~~comprises~~ comprising administering to said subject in need of said treatment an amount of an A_3 adenosine receptor agonist (A_3AR agonist), the amount being effective to inhibit bone resorption.

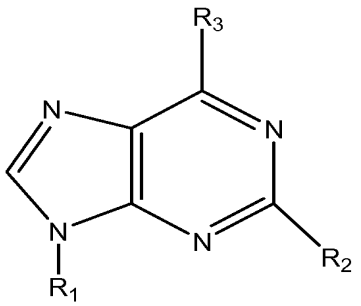
2 (Original). The method of Claim 1, wherein said mammal is a human subject.

3-4 (Cancelled).

5 (Original). The method of Claim 1, wherein said treatment comprises oral administration of A_3AR agonist to said subject in need.

6 (Original). The method of Claim 5, wherein said treatment comprises administration of A_3RA agonist to said subject once or twice daily.

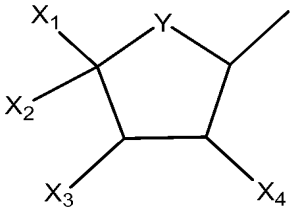
7 (Previously Presented). The method of Claim 1, wherein said A_3AR agonist is a compound within the scope of the general formula (I):



(I)

wherein,

- **R_1** represents an alkyl, hydroxyalkyl, carboxyalkyl or cyanoalkyl or a group of the following general formula (II):



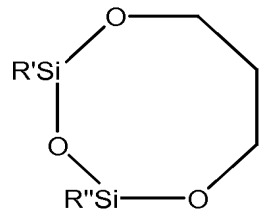
(II)

in which:

- **Y** represents an oxygen, sulfur or CH_2;
- **X_1** represents H, alkyl, $R^aR^bNC(=O)$- or HOR^c-, wherein
  - **R^a** and **R^b** may be the same or different and are selected from the group consisting of hydrogen, alkyl, amino, haloalkyl, aminoalkyl, BOC-aminoalkyl, and cycloalkyl or are joined together to form a heterocyclic ring containing two to five carbon atoms; and
  - **R^c** is selected from the group consisting of alkyl, amino, haloalkyl, aminoalkyl, BOC-aminoalkyl, and cycloalkyl;

- $\mathbf{X_2}$ is H, hydroxyl, alkylamino, alkylamido or hydroxyalkyl;

- $\mathbf{X_3}$ and $\mathbf{X_4}$ represent independently hydrogen, hydroxyl, amino, amido, azido, halo, alkyl, alkoxy, carboxy, nitrilo, nitro, trifluoro, aryl, alkaryl, thio, thioester, thioether, -OCOPh, -OC(=S)OPh or both $\mathbf{X_3}$ and $\mathbf{X_4}$ are oxygens connected to >C=S to form a 5-membered ring, or $\mathbf{X_2}$ and $\mathbf{X_3}$ form the ring of formula (III):



(III)

where **R'** and **R''** represent independently an alkyl group;

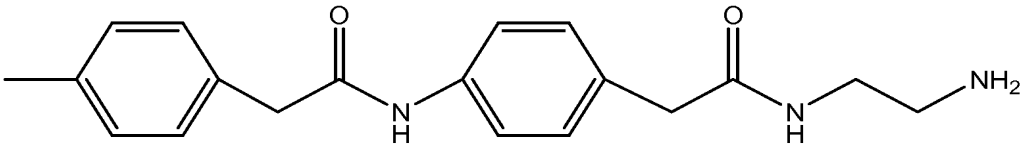
- $\mathbf{R_2}$ is selected from the group consisting of hydrogen, halo, alkylether, amino, hydrazido, alkylamino, alkoxy, thioalkoxy, pyridylthio, alkenyl; alkynyl, thio, and alkylthio; and

- $\mathbf{R_3}$ is a group of the formula $-NR_4R_5$ wherein

- $\mathbf{R_4}$ is a hydrogen atom or a group selected from alkyl, substituted alkyl or aryl-NH-C(Z)-, with **Z** being O, S, or NR^a with $\mathbf{R^a}$ having the above meanings; wherein when $\mathbf{R_4}$ is hydrogen then

- $\mathbf{R_5}$ is selected from the group consisting of R- and S-1-phenylethyl, benzyl, phenylethyl or anilide groups unsubstituted or substituted in one or more positions with a substituent selected from the group consisting of alkyl,

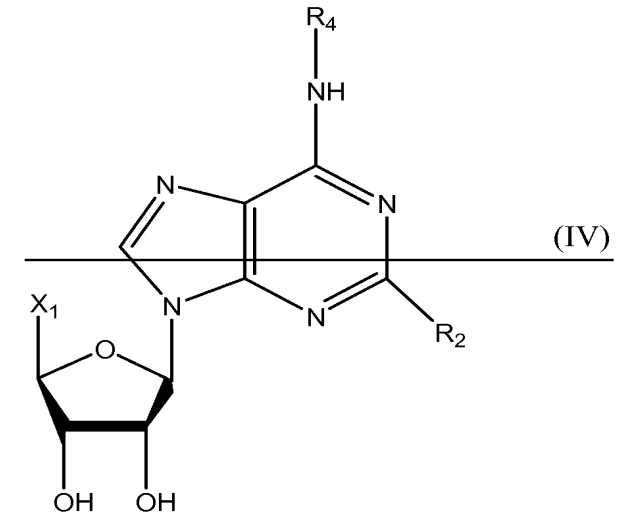
amino, halo, haloalkyl, nitro, hydroxyl, acetoamido, alkoxy, and sulfonic acid or a salt thereof; benzodioxanemethyl, fururyl, L-propylalanyl- aminobenzyl, β-alanylamino- benzyl, T-BOC-β-alanylaminobenzyl, phenylamino, carbamoyl, phenoxy or cycloalkyl; or R_5 is a group of the following formula:



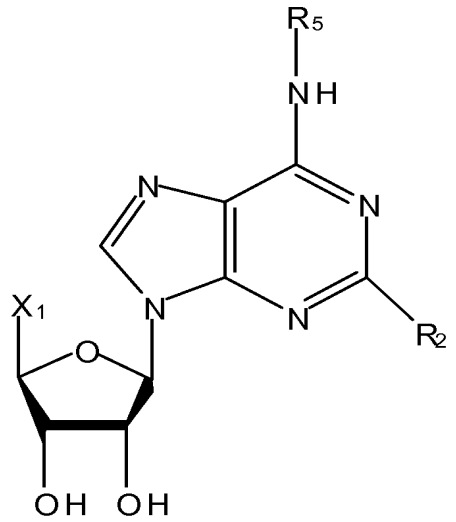
or when **R_4** is an alkyl or aryl-NH-C(Z)-, then, **R_5** is selected from the group consisting of heteroaryl-NR^a-C(Z)-, heteroaryl-C(Z)-, alkaryl-NR^a-C(Z)-, alkaryl-C(Z)-, aryl-NR-C(Z)- and aryl-C(Z)-; **Z** representing an oxygen, sulfur or amine;

or a physiologically acceptable salt of the above compound.

8 (Currently Amended). The method of claim 1, wherein said A_3AR agonist is a nucleoside derivative of the general formula (IV):



(IV)



(IV)

wherein

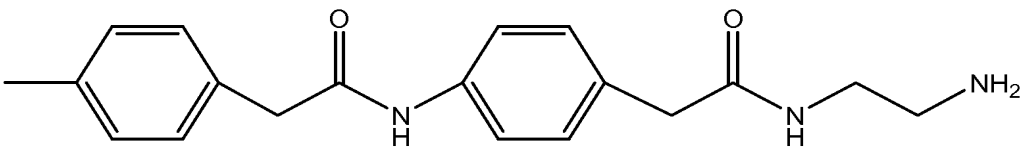
X_1 represents H, alkyl, $R^aR^bNC(=O)$- or HOR^c-, wherein

- **R^a** and **R^b** may be the same or different and are selected from the group consisting of hydrogen, alkyl, amino, haloalkyl, aminoalkyl, BOC-aminoalkyl, and cycloalkyl or are joined together to form a heterocyclic ring containing two to five carbon atoms; and

- R^c is selected from the group consisting of alkyl, amino, haloalkyl, aminoalkyl, BOC-aminoalkyl, and cycloalkyl;

R_2 is selected from the group consisting of hydrogen, halo, alkylether, amino, hydrazido, alkylamino, alkoxy, thioalkoxy, pyridylthio, alkenyl; alkynyl, thio, and alkylthio; and

~~R_4 is a hydrogen atom or a group selected from alkyl, substituted alkyl or aryl-NH-C(Z)-, with Z being O, S, or NR^a with R^a having the above meanings ,~~ R_5 is selected from the group consisting of R- and S-1-phenylethyl, benzyl, phenylethyl or anilide groups unsubstituted or substituted in one or more positions with a substituent selected from the group consisting of alkyl, amino, halo, haloalkyl, nitro, hydroxyl, acetoamido, alkoxy, and sulfonic acid or a salt thereof; benzodioxanemethyl, fururyl, L-propylalanyl-aminobenzyl, β-alanylamino- benzyl, T-BOC-β-alanylaminobenzyl, phenylamino, carbamoyl, phenoxy or cycloalkyl; or R_5 is a group of the following formula:



or when R_4 is an alkyl or aryl-NH-C(Z)-, then, R_5 is selected from the group consisting of heteroaryl-NR^a-C(Z)-, heteroaryl-

C(Z)-, alkaryl-NR^a-C(Z)-, alkaryl-C(Z)-, aryl-NR-C(Z)- and aryl-C(Z)-; **Z** representing an oxygen, sulfur or amine;

and physiologically acceptable salts of said compound.

9 (Original). The method of Claim 1 wherein said A_3AR agonist is selected from N^6-2- (4-aminophenyl)ethyladenosine (APNEA), N^6-(4-amino-3-iodobenzyl) adenosine- 5'-(N-methyluronamide) (AB-MECA), N^6-(3-iodobenzyl)-adenosine-5'-N-methyluronamide (IB-MECA) and 2-chloro-N^6-(3-iodobenzyl)-adenosine-5'-N-methyluronamide (Cl-IB-MECA).

10 (Original). The method of claim 9, wherein said A_3AR agonist is IB-MECA.

11-19 (Cancelled).

20 (New). The method of claim 1, wherein said subject is other than one suffering from an inflammatory arthritis.